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ABSTRACT

Using a series of FORTRAN programs written for use on an IBM 1130 computer, the periodical holdings of Bluefield State College and Concord College in West Virginia have been jointly cataloged. The programs will produce periodical listings for each of the school's individual libraries, for the combined holdings of the two schools, and by subject area. It is felt that the use of this program will result in improved periodical services to users as well as in cost savings. (DGC)

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Title: A Computerized Periodical-Retrieval System

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Abstract: The austerity thrust coupled with the accountability battlecry of the 1970's have forced academic libraries to engage in more cooperative pursuits. In compliance with the national trend, the libraries at Bluefield State College and Concord College are maximizing the utilization of their periodical resources. Since the two colleges have the IBM 1130 Computing System, a computerized periodical-retrieval system was designed which would permit the faculty, students and other library patrons at the two colleges to obtain a printout of the periodicals in just one library, to obtain a printout of the complete periodical holdings in both libraries, and to obtain a printout of the periodicals by subject matter (e.g., botany) and by location (i.e., "B" for Bluefield State and "C" for Concord). The Fortran computer language was used with a modified National Laboratory of Higher Education Information System package. Essentially, periodical services for both libraries have been improved significantly; funds have been saved by: 1.) Reducing the purchasing of backruns of periodicals if they are already owned by one of the libraries, and 2.) Reducing the purchasing of duplicate titles which have little demand.

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A COMPUTERIZED PERIODICAL-RETRIEVAL SYSTEM

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Introduction. Today institutions of higher education are combining efforts, sharing resources, and allocating functions in order to get more for their money and greater use of resources. Special efforts are being made to create sharing plans. This article concerns a computerized periodical-retrieval system which is right in step with the "pooling of resources" movement which is taking place in today's higher education circles.

Two state 4-year colleges are located about 20 miles apart in southern West Virginia. Both colleges, Bluefield State College and Concord College, are predominantly teacher-training institutions and consequently much duplication of identical pursuits and resources occurs. Also, both colleges have the IBM 1130 Computing System. The two colleges have a combined total subscription to about 1500 periodical titles. With the cost of periodicals rising along with the information explosion, it is becoming imperative for one to stretch his imagination toward developing an effective way of pooling and using the periodicals' resources at the two colleges.

Statement of Purpose. The purpose of this article is to describe explicitly how a computerized periodical-retrieval system has been developed by using the IBM 1130 Computing System. The primary intent of the periodical-retrieval system is that of enabling faculty, staff, and students at Bluefield State College and Concord College to have access to periodical holdings at both colleges via subject matter of the periodical, dates, and location (i.e., on

which campus the periodical is located).

Methodology and Procedures. The methodology and procedures involved with this system will specifically be explained by using the following 16 questions with answers and augmented by the flowchart.

1. How is the data collected?

Data is collected from the two librarians who are responsible for the periodicals. Title, dates, and location of the periodicals are denoted. A trained student assistant can collect the data.

2. How is the data prepared?

Title of the periodical (sometimes truncated), dates (beginning, closing and open), subject code number (five possible areas), and location of periodical are keypunched into the cards as illustrated by the following examples:

Title	Dates	Subjects C1	C2	C3	C4	C5	Location
ADULT EDU	1951, 54-	084					B
ADULT EDU	1961-	084					C
AM ANTHROPOLOGIST	LAC 1886-1905	007					B

The subject code number (e.g., 084 for education) will be assigned to each periodical title. Some titles may have up to five different, but related, subject code numbers. The subject code numbers may be arbitrarily adopted from the "Key to Subjects" in Ulrich's International Periodicals Directory. Class numbers given in the "Table of Contents" in The Standard Periodical Directory may also be used for subject code numbers.

For explicitness sake, the dates section of the above examples contains the following information:

A. 1951, 54- This example reveals that the library received the periodical for the year 1951. The years 1952 and 1953 were not received. In 1954 the library again commenced receiving the periodical and continues to receive it.

B. LAC 1888-1905 -- Here is an example of a periodical which is on a special format (Library of American Civilization on microfiche) which began in 1888 and discontinued in this particular format in 1905.

The last item to be punched into the cards is the location of the periodical. A "B" represents Bluefield State College and a "C" represents Concord College.

3. What software is used?

Weiss (1969) describes software as being that part of the computing system which cannot be seen or touched -- it consists of a collection of programs that make the computer easier to use and more effective. Therefore, the modified National Laboratory for Higher Education Information System package is the essential software utilized in this computing system.

4. What computer language is involved?

Fortran.

5. What hardware is used?

The hardware consists of a keypunch machine with cards, an IBM 1130 Computing System, an IBM 1442 Card Read Punch, an IBM 1131 Processor, disk, and printout.

6. What personnel is needed?

Initially, the system requires the cooperation of the librarians who are

responsible for the periodicals, a keypuncher, and a programmer. A student assistant (with keypunching ability and computer competency) can handle the transactions after the initial steps have been developed and proven operationally sound.

7. How will the data be stored?

As previously mentioned, the data will first be punched into cards. Subsequently, the data would be stored on a disk. The printouts would come from the disk.

8. How is the data going to be retrieved?

The use of an example is the best way to answer this question. Example: If a faculty member desires a printout of all periodicals at both colleges in the field of education (084), then the program would contain the following:

```
   SELECT ALL 084
SELECTION 5
FIELD = (A,4),LIMITS=('084','084')
FIELD = (B,5),LIMITS=('084','084')
FIELD = (C,6),LIMITS=('084','084')
FIELD = (D,7),LIMITS=('084','084')
FIELD = (E,8),LIMITS=('084','084')
   A OR B OR C OR D OR E
(title card)
SORT 1
SORT 9
PRINT
END
```

The above portion of the program would inform the computing system to give a printout of all periodicals (with dates and locations) dealing with education (084).

9. How will the data file be updated?

A new card containing the new information will have to be keypunched in order to keep the file updated. The new information will then be stored on the disk at the end of the sequential section of the disk. However, when the information (periodicals) is sorted by subject area the periodical titles will be arranged alphabetically.

10. How are corrections made?

By keypunching a new card.

11. Does one need the computer for this operation?

Yes. At the two colleges mentioned in this article, the computer is required before the system can be operative.

12. Can other computers (e.g., RCA, Honeywell, or other IBM series) use an adapted form of the program for this particular periodical-retrieval system?

Yes.

13. Why is the computer needed?

For two primary reasons: A.) To save time, and B.) For sophisticated sorting by subject area.

14. What costs does this system encompass?

The first cost which must be accounted for is the $25.00 for the IBM 1130 package (NLHE Information System) to operate the system. Other initial costs include the keypuncher's time, cards, and disk. Once the system gets the periodical information on disk the cost would be minimal for updating. The cost for printouts would be contingent upon the amount of requests desired.

15. What provisions are made for emergency?

Since there are identical IBM 1130 Computing Systems on both campuses and the card decks and disks are interchangeable, few problems should evolve if one computer becomes inoperative.

16. What unique usefulness does this system possess?

Many times faculty and students are in need of a list of periodical titles in their subject specialties. This system contains the sophistication for supplying a complete periodical printout by subject matter along with location (Bluefield State College and/or Concord College). It is also very easy to keep up to date.

Conclusion. This computerized periodical-retrieval system provides an opportunity for the two college libraries to save money by reducing expensive acquisition of certain identical periodical titles and to promote more effective utilization of existing periodical resources. The system or a similar one can be readily adopted by other libraries that are interested in retrieving periodicals by subject area or in pooling periodical resources. The computer program used with the system is available from the author.

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